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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 905,229	07-13-2001	Guido Sartori	LMS-0004	3464

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EXAMINER

ANTHONY, JOSEPH DAVID

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/905, 229

Applicant(s)

Examiner

Group Art Unit

1714

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 7/18/01 AS I.D.S.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-7 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-7 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite because there is no antecedent basis in claim 1 for the term "oil".

Claim 7 is indefinite for two reasons: 1) the process of claim 1 on which claim 7 is dependent, does not produce a composition. Rather a composition may be made to perform the claimed process., and 2) no composition is necessarily made to perform the claim process of claim 1, since the corrosion prone metal surface can be contacted with phosphorous acid by itself.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. IMPORTANT NOTE for the following Prior-Art rejections: The claimed process of independent claim 1 does not require that the phosphorous acid anti-corrosion agent be incorporated into an organic-acid containing petroleum stream. See claim 2 for proof. The process of claim 1 only requires that the corrosion prone metal-surface to be exposed to such organic-acid containing stream is exposed (i.e. claim is open to all types of exposure) to phosphorous acid. In other words, the actually exposure of the corrosion prone metal-surface to an organic-acid containing petroleum stream is not required by applicant's claimed process of claims 1 and 3-7. As such, applicant's claimed temperature ranges are deemed to be moot. Also deemed to be moot for claims 1 and 3-7 is the process means (e.g. phosphorous acid by itself or as a composition containing water, alcohol and/or petroleum products) by which the applied prior-art references expose the metal surfaces to phosphorous acid.

Applicant's attention is also drawn to Wilson et al. U.S. Patent Number 4,389,371 and to Konig-Lumer et al. U.S. Patent Number 4,358,389 both of which directly disclose that

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phosphorous acid is a well known conventional corrosion inhibitor for metal surfaces, see the abstract of Wilson et al and column 5 of Konig-Lumer et al..

6. Claims 1 and 3-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shell et al. U.S. Patent Number 4,024,051 or Gillespie et al. U.S. Patent Number 3,558,470.

Shell et al teaches using an antifoulant in a crude oil heating process. The antifoulant is an inorganic phosphorus containing acid such as phosphorous acid which is added to the crude oil which is subsequently refined at a temperature from 100 to 1500° F. Applicant's claims are deemed to be anticipated over Example I when phosphorous acid (No. 8.4) as set forth in Table I is used at a concentration of 300 ppm in the taught process. Applicant's claims are also deemed to be anticipated over Example II when phosphorous acid (No. 9.2) as set forth in Table II is used at a concentration of 10 ppm in the taught process. It is deemed by the examiner that the taught antifoulant process would inherently inhibit corrosion since the phosphorous acid used in the patent's process is a known conventional corrosion inhibitor for metal surfaces.

Gillespie et al teaches antifoulant process using a combination of minor amounts of: 1) the condensation product of long chain alkyl or alkenyl monocarboxylic acid and at least one polyalkylene polyamine and 2) and additional agent such as **phosphorous acid** or an organic phosphite ester. Applicant's claims are deemed to be anticipated over the processes of Example 5 wherein the product of Example 2 is used. It must be pointed out that it is well known in the art that the hydrolyzed product of phosphorus trichloride as set forth in example 2, is phosphorous

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acid. It is deemed by the examiner that the taught antifoulant process would inherently inhibit corrosion since the phosphorous acid used in the patent's process is a known conventional corrosion inhibitor for metal surfaces.

7. Claim 2 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shell et al. U.S. Patent Number 4,024,051 or Gillespie et al. U.S. Patent Number 3,558,470.

Shell et al and Gillespie et al have been described above. Applicant's claimed process is deemed to be anticipated over the cited section of each patent. In the alternative, these patents may differ from applicant's claimed invention in that it is somewhat unclear if the specific examples cited by the example actually use an organic-acid containing petroleum stream into which the phosphorous acid is added.

It would have been obvious to one having ordinary skill in the art to use the broad disclosure of each patent as motivation to add phosphorous acid to organic-acid containing petroleum streams since such organic-acid containing petroleum streams are deemed to be directly encompassed by the crude petroleum starting material that is used in the disclosed processes. It must be pointed out that it is very well known in the art that naphthenic acid (an organic acid) is very often contained in crude petroleum products.

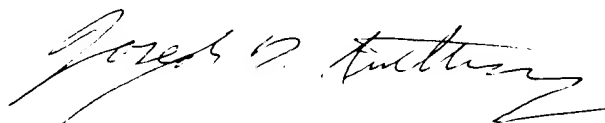
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Prior-Art Cited But Not Applied

8. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Examiner Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-0446. This examiner can normally be reached on Monday through Thursday from 7:35 a.m. to 6:00 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The group (**non-after final**) FAX machine number is (703) 872-9310. The group (**after final**) FAX machine number is (703) 872-9311. Unofficial correspondence transmitted by FAX must be marked "DRAFT". All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0651. The receptionist is located on the 8th floor of Crystal Plaza 3 (e.g. CP-3) and will be the welcome point for all visitors to the building.



**Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714**

3/13/03